



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/916,116	07/26/2001	Bruce E. Price	RGP-0062	8624
23413	7590	03/25/2005	EXAMINER	
CANTOR COLBURN, LLP 55 GRIFFIN ROAD SOUTH BLOOMFIELD, CT 06002			CHANG, VICTOR S	
			ART UNIT	PAPER NUMBER

1771

DATE MAILED: 03/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.



UNITED STATES PATENT AND TRADEMARK OFFICE

---

COMMISSIONER FOR PATENTS  
UNITED STATES PATENT AND TRADEMARK OFFICE  
P.O. Box 1450  
ALEXANDRIA, VA 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 09/916,116  
Filing Date: July 26, 2001  
Appellant(s): PRICE ET AL.

---

Leah M. Reimer  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 2/14/2005.

TS

**(1) *Real Party in Interest***

A statement identifying the real party in interest is contained in the brief.

**(2) *Related Appeals and Interferences***

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

**(3) *Status of Claims***

The statement of the status of the claims contained in the brief is correct.

**(4) *Status of Amendments After Final***

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) *Summary of Invention***

The summary of invention contained in the brief is correct.

**(6) *Grounds of rejection Presented for Appeal***

The appellant's statement of the grounds of rejection in the brief is correct.

**(7) *Claims Appealed***

The copy of the appealed claims contained in the Appendix A to the brief is correct. It should be noted that the Amendment After Final has been entered.

**(8) *Prior Art of Record***

3,839,078

Birchall et al.

10-1974

**(9) *Grounds of Rejection***

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1-19 and 34-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicants' admission in view of Birchall et al. (US 3839078).

Applicants have admitted in the specification that it is known art that flexible foam tapes are commonly used in flexographic printing, and these tapes, commonly referred to as foam cushion tapes, comprises a flexible compressible foam layer adhered to one side of a reinforcing film, with an adhesive layer disposed on the opposite side of the film. A second adhesive layer is disposed on the outside of the foam layer. The tapes are typically made in the thickness of 15 to 60 mil (pages 1-2, bridging paragraph). Regarding the materials for making the foam cushion tapes, Applicants also admitted that typically they are manufactured by laminating a cast foam layer (polyethylene, ethylvinyl acetate, polyvinyl chloride, or polyurethane) to one side of a polyethylene terephthalate (PET) film (i.e., reinforcing layer), and the second adhesive layer is disposed between the PET film and a release layer. Further, it is known that, after use, the PET reinforcing film may delaminate from the foam during removal of the printing plate from a used tape (page 2, first full paragraph).

For claims 1-3, 5, 6, 10 and 34, it is noted that the admitted prior art lacks a teaching of having an anchoring layer between the reinforcing layer and the foam layer. However, it is noted that Birchall's invention is directed to a method of coating substrates (Abstract). Birchall teaches that it has been a common practice to coat a surface of a film substrate with one or more adhesion promoting layers which adhere to the film substrate and to which the superstrate (coating) readily adheres. Such intermediate coating layers are often referred to as anchor coatings and are derived, for

Art Unit: 1771

example, from an isocyanate-ended polyurethane resin, a phenol-formaldehyde resin or a vinylidene chloride - alkyl acrylate copolymer resin (column 21, line 61 to column 22, line 14). Suitable film substrates are polymeric films such as PET films (column 8, line 60), and examples of coatings (superstrates) include polyurethanes, etc. (column 14, line 53 to column 15, line 4). As such, in the absence of unexpected results, it would have been obvious to one of ordinary skill in the art to modify Applicants' admitted prior art by incorporating a commonly practiced anchor layer of isocyanate-ended polyurethane or vinylidene chloride - alkyl acrylate copolymer between the reinforcing PET film substrate and the polyurethane foam layer, motivated by the desire to obtain an improved adhesion between the layers, so as to alleviate the known delamination problem upon the removal of the printing plate from a used tape. Finally, it should be noted that Birchall's isocyanate-ended polyurethane or vinylidene chloride - alkyl acrylate copolymer read on the generic materials of the instantly claimed anchor layer of polyurethane and polyvinylidene chloride.

For claim 4, the Examiner's statement "the polyurethane foams used in flexographic printing are inherently open-celled" in the in the prior Office action dated 10/25/2002 is taken to be admitted prior art because Applicants failed to traverse the Examiner's assertion.

For claims 7 and 35, regarding the product-by-process recitation "... film is formed by co-extrusion", the Examiner notes that since the method limitations have not been shown on the record to produce a patentably distinct article, the formed articles

Art Unit: 1771

are rendered *prima facie* obvious. It should be noted that Applicants have not traversed Examiner's position.

For claims 8, 9, 11 and 12, the Examiner notes that the common knowledge or well-known in the art statement "acid etching a polymer surface for improved adhesion, applying a primer layer between an adhesive layer and a foam substrate layer, and attach a release layer made of a release coating, an intermediate layer, and a liner to protect the adhesive layer are each common and well-known" in the prior Office action dated 10/25/2002, page 4, last full paragraph, is taken to be admitted prior art because Applicants have failed to traverse the Examiner's assertion.

For claims 13-19, 36 and 37, it is noted that the claims are within the same scope of instantly claimed elements and limitations as claims 1-12. As such, they are also rejected for the same reasons as set forth above.

**(10) Response to Argument**

First, the Examiner notes that the After Final Amendment dated 2/14/2005 has been entered, because the deletion of the phrase "configured for flexographic printing" in claims 1 and 13 overcomes the prior rejection under 35 USC 112, second paragraph, of Office action dated 7/16/2004, and place the application in better form for appeal by materially reducing the issues for appeal. Also, the Examiner agrees that the amendments to claims 1 and 13 to incorporate the phrase "for flexographic printing" in the preamble are supported throughout the specification, and the amendments do not change the scope of the instant invention.

With respect to Appellants' argument "Appellants ... disagree with the Examiner's contention that the "common" use of anchor layers to provide enhanced adhesion between layers would have provided an adequate motivation to one of ordinary skill in the art in the present instance. In the present case the adhesion between layers was more than adequate for the intended purpose of the tape. As stated in the specification, and shown in the Declaration of Brett Kilhenny, failure of the claimed foam cushion tapes upon removal from a drum was not due to insufficient adhesion between the polyurethane foam and the reinforcing layer. It was due, instead, to weak cohesive strength of the reinforcing layer itself. In other words ... the reinforcing layer fails before the bond fails." (Brief, page 5, second full paragraph), the Examiner repeats that since it is known that, after use, the PET reinforcing film may delaminate from the foam during removal of the printing plate from a used tape, and Birchall expressly teaches that it has been a common practice to use an adhesion promoting anchor layer to improve the adhesion between layers, the motivation to incorporate an anchor layer to alleviate the known delamination problem of foam cushion tapes is obvious. As to the delamination mechanism, it should be noted that since Appellants' admission in view of Birchall do teach all the structural and compositional elements of the instant invention as claimed, it is the Examiner's position that the mechanism of preventing delamination failure by the anchor layer is either inherent or obviously provided once the same product as claimed is made. Finally, the Examiner would like to point out that Appellants' foregoing argument "failure of the claimed foam cushion tapes ... was not due to insufficient adhesion between the polyurethane foam and the reinforcing layer. It was due, instead,

to weak cohesive strength of the reinforcing layer itself.” appears to be incommensurate with the motivation to incorporate an anchor layer between laminated layers, because while the anchor layer improves the adhesion at interfaces, the anchor layer does not modify the bulk property of a polymer, such as the cohesive strength of the PET reinforcing layer, as such, it would not have been obvious to one of ordinary skill to be motivated to use an anchor layer to alleviate cohesive failure (failure in the bulk, not at interface) of the PET film.

With respect to Appellants’ argument “the purpose of the present “anchoring” layer is to prevent cohesive failure of the reinforcing film, rather than to increase the adhesion between a substrate and a superstrate” (Brief, page 6 top paragraph), the Examiner repeats that Appellants’ cohesive failure mechanism is incommensurate with the motivation to incorporate an adhesion improving anchor layer, as set forth above. Nevertheless, it should be emphasized that Appellants’ admission in view of Birchall do teach all the structural and compositional elements of the instant invention as claimed, and the motivation to incorporate an anchor layer to alleviate the known delamination problem of foam cushion tapes is obvious.

Appellants’ argument “[t]he materials used in the present invention ... are “polyurethanes” and “polyvinylidene chloride.” These are not the same as “isocyanate-ended polyurethane resin” or “a vinylidene-chloride-alkyl acrylate copolymer resin.” They are derived from the same units as the materials of Birchall, but they are not the same materials because they are not synthesized to have reactive groups available for bonding to a substrate and superstrate.” (Brief, page 6, first full paragraph) has been



carefully considered, not is not persuasive. First, the Examiner notes that Appellants have not traversed the composition of Birchall's anchor layer in the previous replies. Second, the Examiner repeats that Birchall's isocyanate-ended polyurethane or vinylidene chloride - alkyl acrylate copolymer read on the generic materials of the instantly claimed anchor layer of polyurethane and polyvinylidene chloride, as set forth above. In other words, Birchall's disclosure of species reads on the generic terms of the instant invention.

With respect to Appellants' argument "Nothing within the knowledge of one of ordinary skill in the art or Birchall indicates that cohesive failure of a reinforcing layer may be prevented by use of an adhesion-promoting layer ... it is unexpected that the presence of a layer used to improve bond would prevent delamination." (Brief, page 7, second full paragraph), the Examiner notes that while if the delamination is indeed caused by cohesive failure of the PET film, there is a lack of motivation to use an anchor layer to improve the cohesive strength, because it is a bulk property, not surface property, of a polymer, and it appears that Appellants' solution to solve the delamination problem is incommensurate the use of an anchor layer, as set forth above, nonetheless, the Examiner repeats again that since it is known that, after use, the PET reinforcing film may delaminate from the foam during removal of the printing plate from a used tape, and Birchall expressly teaches that it has been a common practice to use an adhesion promoting anchor layer to improve the adhesion between layers, it would have been obvious to one of ordinary skill in the art of laminate to incorporate an anchor layer between the layers to alleviate the known delamination problem of foam cushion tapes.

In other words, the improvement by an anchor layer to prevent delamination is expected, i.e., not an unexpected result.


With respect to Appellants' argument "Birchall merely teaches that the disclosed anchoring layers can be used to improve adhesion between "organic plastic films", together with "superstrates" such as a heat-sealable coating ... The Examiner has provided no technical or factual grounds for any assertion that use of the adhesion-promoting layers used in Birchall would necessarily produce results obtained herein with polyurethane foams, particularly in combination with the anchoring layers and reinforcing layers" (Brief, page 8, bottom paragraph), the Examiner notes that Appellants appear to argue the cited references individually. In response to Applicant's arguments, it is asserted that one cannot show non-obviousness by attacking references individually where the rejections are based on combinations of references. More particularly, the Examiner repeats that the combined teachings of Applicants'


Art Unit: 1771

admission and Birchall render *prima facie* obvious the instant invention as claimed, and an improvement to prevent delamination is expected.

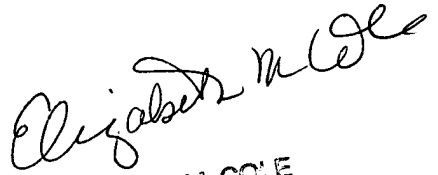
For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

  
Victor S Chang  
Examiner  
Art Unit 1771  
March 17, 2005

Conferees  
Terrel Morris  
Rena Dye 

CANTOR COLBURN, LLP  
55 GRIFFIN ROAD SOUTH  
BLOOMFIELD, CT 06002

  
WILLIAM M. COLE  
EXAMINER